IN THE CLAIMS:

Please **AMEND** claims 1-2, 7, 10-11, 17, 20, and 24-25 as follows.

Please **ADD** claims 26-55 as follows.

1. (Currently Amended) A data transmission method in a communication system, the system comprising at least one base station and at least one subscriber station, wherein the at least one subscriber station allocates capacity for connections, the method comprising:

first transmitting from a subscriber station at least one capacity request message;

granting a capacity subscriber station-specifically by a base station;

second transmitting at least one capacity grant message from the base station;

connection-specifically allocating granted capacity ~~connection-specific~~ by the subscriber station;

third transmitting from the subscriber station at least one message wherein the at least one message comprises information based on previous capacity requests;

fourth transmitting data from the subscriber station according to a capacity allocation; and

monitoring by the base station of at least one of capacity request messages, capacity grant messages and received transmissions.

2. (Currently Amended) A data transmission method in a communication system, the system comprising at least one base station and at least one subscriber station,

wherein the at least one subscriber station allocates capacity for connections, the method comprising:

first determining communication groups;

second determining a group priority order;

first transmitting at least one capacity request message from a subscriber station;

granting a capacity subscriber station-specifically by a base station;

second transmitting at least one capacity grant message from the base station;

scheduling connections by the subscriber station based on the communication groups, the group priority order and the granted capacity;

third transmitting from the subscriber station at least one message, wherein the at least one message comprises information based on previous capacity requests;

fourth transmitting data from the subscriber station, wherein the data is related to a connection scheduling; and

monitoring by the base station of at least one of capacity request messages, capacity grant messages and received transmissions.

3. (Original) The method of claim 2, wherein the first determining step comprises determining the communication groups based on connection quality demands.

4. (Original) The method of claim 2, wherein the second determining step comprises defining the group priority order based on connection quality demands.

5. (Original) The method of claim 2, wherein the first determining step comprises determining the communication groups comprising a service class selected from at least one of Unsolicited Grant Service, Real-Time Polling Service, Non-Real-Time Polling Service and Non-Unsolicited Grant Service.

6. (Orginal) The method of claim 1, wherein the monitoring step comprises monitoring data based on messages and transmissions using a memory table.

7. (Currently Amended) The method of claim 1, wherein the third transmitting step comprises transmitting an update message which replaces at the base station a previous information connection-specifically.

8. (Original) The method of claim 1, wherein the third transmitting step comprises transmitting an update message which replaces information based on a need for bandwidth for a connection.

9. (Original) The method of claim 1, wherein the step of monitoring by the base station comprises using information based on the request messages, the capacity grant messages and the received transmissions for avoiding a mismatch between a granted capacity and data received from a subscriber station.

10. (Currently Amended) A communication system, the system comprising:

first transmitting means for transmitting capacity request messages;

granting means for granting a capacity subscriber station-specifically;

second transmitting means for transmitting capacity grant messages;

allocating means for connection-specifically allocating granted capacity ~~connection-specific~~;

third transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests;

fourth transmitting means for transmitting data according to the capacity allocation made by a subscriber station; and

monitoring means for monitoring at least one of the request messages, capacity grant messages and received transmissions.

11. (Currently Amended) A communication system, the system comprising:

grouping means for grouping connections into predetermined communication groups;

first transmitting means for transmitting capacity request messages;

granting means for granting a capacity subscriber station-specifically;

second transmitting means for transmitting capacity grant messages;

scheduling means for scheduling connections based on the communication groups, a predetermined group priority order and the granted capacity;

third transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests;

fourth transmitting means for transmitting data according to a connection scheduling; and

monitoring means for monitoring at least one of the request messages, the capacity grant messages and received transmissions.

12. (Original) The system of claim 11, wherein the communication groups are arranged into a priority order.

13. (Original) The system of claim 11, wherein the communication groups comprise a service class selected from at least one of Unsolicited Grant Service, Real-Time Polling Service, Non-Real-Time Polling Service and Non-Unsolicited Grant Service .

14. (Original) The system of claim 10, wherein the monitoring means comprising monitoring data based on messages and transmissions using a memory table.

15. (Original) The system of claim 10, further comprising fifth transmitting means for transmitting update messages comprising information based on previous capacity requests, wherein the update messages replace at the base station previous information on a connection.

16. (Original) The system of claim 10, further comprising avoiding means for avoiding mismatch between a granted capacity and data received from a subscriber station using information based on the request messages, the capacity grant messages and the received transmissions.

17. (Currently Amended) A base station of a communication system, the base station comprising:

granting means for granting a transmission capacity subscriber station-specifically;

transmitting means for transmitting capacity grant messages to at least one subscriber station; and

monitoring means for monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

18. (Original) The base station of claim 17, wherein the monitoring means comprises monitoring data based on messages and transmissions using a memory table.

19. (Original) The base station of claim 17, further comprising avoiding means for avoiding a mismatch between a granted capacity and data received from a subscriber station using information based on request messages, capacity grant messages and received transmissions.

20. (Currently Amended) A subscriber station of a communication system, wherein the subscriber station allocates a capacity for connections, the subscriber station comprising:

first transmitting means for transmitting capacity request messages of at least one connection;

receiving means for receiving capacity grant messages from a base station;

allocating means for connection-specifically allocating ~~connection-specific~~ a capacity granted by a base station;

second transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station; and

third transmitting means for transmitting data according to a capacity allocation made by the subscriber station.

21. (Original) A subscriber station of a communication system wherein the subscriber station allocates capacity for connections, the subscriber station comprising:

first transmitting means for transmitting capacity request messages of at least one connection;

grouping means for grouping connections into predetermined communication groups;

scheduling means for scheduling the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station;

second transmitting means for transmitting messages wherein the messages comprise information based on previous capacity requests; and

third transmitting means for transmitting data according to a connection scheduling.

22. (Original) The subscriber station of claim 20, wherein the communication groups comprise a service class selected from at least one of Unsolicited Grant Service, Real-Time Polling Service, Non-Real-Time Polling Service and Non-Unsolicited Grant Service.

23. (Original) The subscriber station of claim 20, further comprising fourth transmitting means for transmitting update messages comprising information based on the previous capacity requests, wherein the update messages replace at the base station previous information on the connection.

24. (Currently Amended) A base station of a communication system configured to:

receive capacity request messages from at least one subscriber station;

grant a transmission capacity subscriber station-specifically,

transmit capacity grant messages to the at least one subscriber station; and

monitoring request messages received from the at least one subscriber stations, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber station.

25. (Currently Amended) A subscriber station of a communication system wherein the subscriber station allocates capacity for connections, the subscriber station configured to:

transmit capacity request messages of at least one connection;

allocate connection-specifically a capacity granted by a base station;

transmit messages wherein the messages comprise information on previous capacity requests; and

transmit data from a subscriber station according to a capacity allocation made by the subscriber station.

26. (New) A data transmission method comprising:

receiving capacity request messages;

granting capacity subscriber station-specifically;

transmitting at least one capacity grant message; and

monitoring at least one of capacity request messages, capacity grant messages and received transmissions.

27. (New) The method of claim 26, wherein the step of monitoring comprises using information based on the request messages, the capacity grant messages and the received transmissions for avoiding a mismatch between a granted capacity and data received from a subscriber station.

28. (New) A data transmission method comprising:

transmitting capacity request messages of at least one connection;

receiving capacity grant messages from a base station;

connection-specifically allocating capacity granted by the base station;

transmitting messages, wherein the messages comprise information based on previous capacity requests; and

transmitting data according to capacity allocation.

29. (New) The method of claim 28, wherein transmitting according to capacity allocation comprises transmitting an update message that replaces at the base station a previous information connection-specifically.

30. (New) A data transmission method comprising:

transmitting capacity request messages of at least one connection;

grouping connections into predetermined communication groups;

scheduling the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station;

transmitting messages, wherein the messages comprise information based on previous capacity requests; and

transmitting data according to a connection scheduling.

31. (New) A data processing unit, comprising:

means for receiving capacity request messages;

means for granting capacity subscriber station-specifically based on the capacity request messages;

means for generating at least one capacity grant message; and

means for monitoring at least one of capacity request messages, capacity grant messages and received transmissions.

32. (New) The data processing unit of claim 31, further comprising means for avoiding a mismatch between a granted capacity and data received from a subscriber station using information based on request messages, capacity grant messages and received transmissions.

33. (New) The data processing unit of claim 31, wherein the data processing unit comprises a Digital Signal Processor, a Central processing Unit (CPU) or an Application Specific Integrated Circuit (ASIC).

34. (New) A data processing method, comprising:

receiving capacity request messages;

granting capacity subscriber station-specifically based on the capacity request messages;

generating at least one capacity grant message; and

monitoring at least one of capacity request messages, capacity grant messages and received transmissions.

35. (New) The method of claim 34, wherein the step of monitoring comprises using information based on the request messages, the capacity grant messages and the received transmissions for avoiding a mismatch between a granted capacity and data received from a subscriber station.

36. (New) A data processing unit, comprising:

means for generating capacity request messages of at least one connection;

means for receiving capacity grant messages;

means for connection-specifically allocating the capacity granted in the capacity grant messages; and

means for generating messages, wherein the messages comprise information based on previous capacity requests.

37. (New) The data processing unit of claim 36, wherein the data processing unit comprises a Digital Signal Processor, a Central processing Unit (CPU) or an Application Specific Integrated Circuit (ASIC).

38. (New) A data processing method, comprising:

generating capacity request messages of at least one connection;

receiving capacity grant messages;

connection-specifically allocating the capacity granted in the capacity grant messages; and

generating messages, wherein the messages comprise information based on previous capacity requests.

39. (New) The method of claim 38, further comprising: transmitting the generated messages comprising information based on the previous capacity requests, wherein the messages replace at a base station previous information on the connection.

40. (New) A data processing unit comprising:

means for transmitting capacity request messages of at least one connection;

means for grouping connections into predetermined communication groups;

means for scheduling the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station;

means for transmitting messages, wherein the messages comprise information based on previous capacity requests; and

means for transmitting data according to a connection scheduling.

41. (New) A computer program product encoding a computer program of instructions for executing a computer process for a data transmission method, the process comprising:

receiving capacity request messages;

granting capacity subscriber station-specifically;

generating at least one capacity grant message; and

monitoring at least one of capacity request messages, capacity grant messages and received transmissions.

42. (New) The computer program product of claim 41, wherein the step of monitoring comprises using information based on the request messages, the capacity grant messages and the received transmissions for avoiding a mismatch between a granted capacity and data received from a subscriber station.

43. (New) A computer program distribution medium readable by a computer and encoding a computer program of instructions for executing a computer process for a data transmission method, the process comprising:

receiving capacity request messages;

granting capacity subscriber station-specifically;

generating at least one capacity grant message; and

monitoring at least one of capacity request messages, capacity grant messages and received transmissions.

44. (New) The computer program distribution medium of claim 43, the distribution medium comprising at least one of: a computer readable medium, a program

storage medium, a record medium, a computer readable memory, a computer readable software distribution package, a computer readable signal, a computer readable communications signal, and a computer readable compressed software package.

45. (New) A computer program product encoding a computer program of instructions for executing a computer process for a data transmission method, the process comprising:

generating capacity request messages of at least one connection;

receiving capacity grant messages;

connection-specifically allocating capacity granted in the capacity grant messages; and

generating messages, wherein the messages comprise information based on previous capacity requests.

46. (New) The computer program product of claim 45, further comprising: transmitting the generated messages comprising information based on the previous capacity requests, wherein the messages replace at a base station previous information on the connection.

47. (New) A computer program product encoding a computer program of instructions for executing a computer process for a data transmission method, the process comprising:

transmitting capacity request messages of at least one connection;

grouping connections into predetermined communication groups;

scheduling the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station;

transmitting messages, wherein the messages comprise information based on previous capacity requests; and

transmitting data according to a connection scheduling.

48. (New) A computer program distribution medium readable by a computer and encoding a computer program of instructions for executing a computer process for a data transmission method, the process comprising:

generating capacity request messages of at least one connection;

receiving capacity grant messages;

connection-specifically allocating the capacity granted in the capacity grant messages; and

generating messages, wherein the messages comprise information based on previous capacity requests.

49. (New) The computer program distribution medium of claim 48, the distribution medium comprising at least one of: a computer readable medium, a program storage medium, a record medium, a computer readable memory, a computer readable software distribution package, a computer readable signal, a computer readable communications signal, and a computer readable compressed software package.

50. (New) A computer program distribution medium readable by a computer and encoding a computer program of instructions for executing a computer process for a data transmission method, the process comprising:

transmitting capacity request messages of at least one connection;

grouping connections into predetermined communication groups;

scheduling the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station;

transmitting messages, wherein the messages comprise information based on previous capacity requests; and

transmitting data according to a connection scheduling.

51. (New) A baseband module, comprising:

means for receiving capacity request messages;

means for granting capacity subscriber station-specifically based on capacity request messages;

means for generating at least one capacity grant message;

means for monitoring at least one of capacity request messages, capacity grant messages and received transmissions

52. (New) The baseband module of claim 51, further comprising means for avoiding a mismatch between a granted capacity and data received from a subscriber station using information based on request messages, capacity grant messages and received transmissions.

53. (New) A baseband module, comprising:

means for generating capacity request messages of at least one connection;

means for receiving capacity grant messages;

means for connection-specifically allocating capacity granted in the capacity grant messages; and

means for generating messages, wherein the messages comprise information based on previous capacity requests.

54. (New) The baseband module of claim 53, further comprising means for transmitting the generated messages comprising information based on the previous capacity requests, wherein the messages replace at a base station previous information on the connection.

55. (New) A baseband module comprising:

means for transmitting capacity request messages of at least one connection;

means for grouping connections into predetermined communication groups;

means for scheduling the connections based on the predetermined communication groups, a predetermined group priority order and a capacity granted by a base station;

means for transmitting messages, wherein the messages comprise information based on previous capacity requests; and

means for transmitting data according to a connection scheduling.